

# PUBLIC HEALTH



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No. 8.-Vol. LXV.

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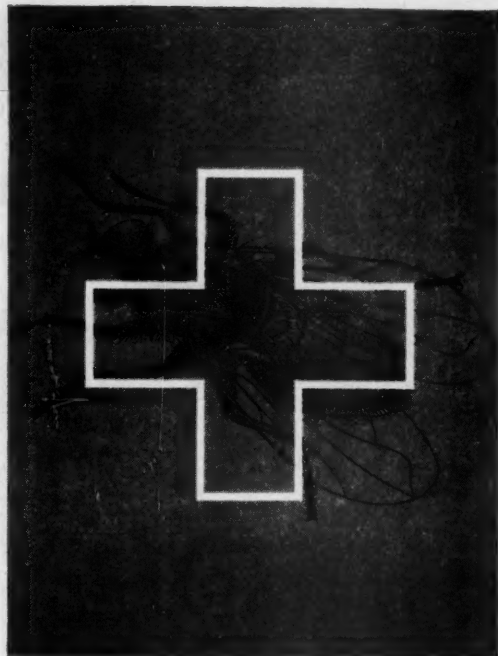
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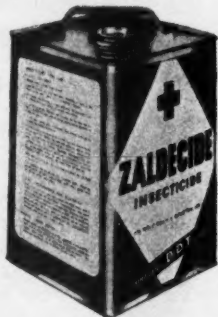
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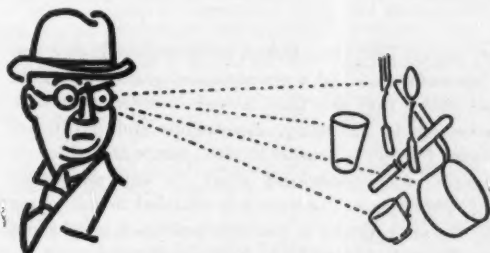
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## EDITORIAL

### A Clinician and an M.O.H. on Health and Disease

Two recent books,\* published within a few weeks of each other, present an interesting comparison and contrast. Both authors are serious thinkers with a more than sectional concept of their subjects, one of the most vital in the present stage of British civilisation. One comparison alone may indicate their apparent difference of approach. In his attempt to define "health" Dr. Walker follows the Spencerian concept of perfect correspondence between a creature and its environment; he reminds us of the etymological significance of the word with its connotation of "wholeness" implying the full development and expression of all human faculties in accordance with the needs of each person. Although each of us is unique and an absolutely controlled environment is impracticable, there can be a wide degree of coincidence among healthy persons and a great possibility of knowing what constitutes health for the vast majority of mankind. He disagrees with the concept of health, *i.e.*, treatment of disease, in the N.H.S. Act, 1946, and also with that of the M.O.H. who regards the control of infectious disease as the beginning and end of his task.

Dr. Roberts, on the other hand, believes that man is bound from the start to fail in his quest for health by the laws of heredity and his descent from an arboreal existence to adopt an erect attitude on the ground. Handicapped by this innate imperfection, man can only define health as capacity, innate or acquired, to resist disease and death, and disease as the failure in such capacity. He is highly critical of attempts to demarcate the boundary between health and disease by subjective feelings or objective signs.

Yet both authors find common ground in their ultimate beliefs that health is a matter for the individual's sense of responsibility. Dr. Roberts in his final summing up writes, "The Health Service is a challenge to the exercise of restraint and unselfishness whereby every person identifies the interests of his fellows with his own. Unless that capacity to induce changes in our environment is accompanied by an equal capacity to adapt ourselves to those

changes, and unless our concept of nature is matched by an equal conquest of ourselves, we shall lose these characteristics of our national life which we hold dear and the Welfare State will surely end in the Totalitarian State." Dr. Walker likewise looks at man not in isolation but as part of larger organisms, the family and the community, and also as a spiritual being. Of the two authors, Dr. Walker is a practising Christian whilst Dr. Roberts gives no overt indication of his beliefs, but both make quite clear the shortcomings of a purely materialistic National Health Service.

It is unnecessary, after the mass of comment which it has provoked in the national and medical Press, to retail at length the theme of Dr. Roberts's argument, that medicine, fertilised by science, has entered on a period of limitless expansion, that the conquest of acute disease and the more and more complicated treatments and palliatives for chronic and degenerative diseases have led to an era of "medicated survival" and, finally, that we have got to make up our minds how much medicine we can afford. The clarity and logic of his writing are such as to carry the reader with him, but we are entitled to ask whether he has a real comprehension of what the preventive and constructive outlook of community medicine can do. Now that foreseeing Medical Officers of Health are everywhere turning their energies to the study and control of "stress" and degenerative disease and to mental and spiritual health, we believe that the public health departments may be able to demonstrate, if given the opportunity by the politicians, that added length of life may be achieved without an accompanying progression in the cost of keeping the aged healthy. As Dr. Walker says, "The aim of Public Health is to preserve as many as possible to die normally, that is, from wear and tear, and not from intercurrent disease." However, we heartily commend Dr. Roberts's book as essential reading for the M.O.H. It will stimulate medical thinking as no other book has done in this generation.

Dr. Walker's book is equally worthy of study by the Public Health Service. His chapter "The Dilemma of the Health Department" is particularly thought-provoking. He points out that public health workers are bound to encounter in their routine work more problems calling for a coherent philosophy than their colleagues in curative medicine, since the latter's work is concerned with a series of isolated cases, whereas the former's is on a larger, community scale and is carried out in front of a greater audience, facts which enhance his ethical responsibilities. He

\* "The Cost of Health." By Frangcon Roberts, M.A., M.D., F.R.S. (Pp. 200. Price 16s. net.) London: Turnstile Press, Ltd., 10, Great Turnstile, W.C.1.

"Health and the Citizen." By J. V. Walker, M.D., M.R.C.P., D.P.H. (Pp. 151. Price 10s. 6d. net.) London: Hollis and Carter, 28, Ashley Place, S.W.1.

believes that the "grief" over the loss of general hospital services is due to a false sense of perspective as to the functions of the M.O.H. On the power to influence public opinion of a policy sponsored and propagated by a local health authority, Dr. Walker astutely points to the major feminine cast of thought of modern British society and suggests that "appeals, whatever their nature, must be so stated as to attract women's attention and enlist their influence and support." In his position as adviser to his authority, the M.O.H. must be prepared to make up his mind on such issues as birth control, euthanasia, sterilisation of the unfit and artificial insemination; if he thinks the ethics of such questions are outside his "brief" and that his consultant standing is limited to infectious diseases, he might as well be replaced by a less well qualified and salaried lay administrator and himself seek refuge in hospital administration.

The author's views are equally forceful and interesting in subsequent chapters, particularly on the questions associated with the family, and on the spiritual context of some modern problems. This book is a challenge to those who, beset by the day-to-day care of the trees, have forgotten the wood of which these form each a part.

### Mental Health and Maternal Care

We draw particular attention to the abridgment of Dr. John Bowlby's address under the above title to the Maternity and Child Welfare Group of the Society which appears on page 139 of this issue. His monograph on this subject, published by the World Health Organisation last year, was one of those documents which cause administrators, clinicians and others concerned with the upbringing of children and the attainment of mental health in the adult to look again at their work and plans to see if they are soundly based. Mental health is now one of the main responsibilities of the health department, and we have pointed out before that there are no better opportunities for inculcating the right attitude of mind or forestalling deviations than in the day-to-day educational work of doctors and nurses working in public health. His address to the M. & C.W. Group should be an encouragement to departmental medical officers who have felt that they are being pushed out in the present competitive age; it is also an incentive for post-graduate study in mother and child psychology.

To the M.O.H. it may give fresh thoughts on decisions which involve the separation of very young children from their natural mothers, or on the policy to be advised in regard to day nurseries.

### Research on Poliomyelitis

The *Monthly Bulletin of the Ministry of Health and Public Health Laboratory Service* for April, 1952, contains an informative note by Prof. G. S. Wilson on the progress of the field researches on poliomyelitis which were inaugurated by the joint circular letter issued in February, 1951, to all medical officers of health over the signatures of Sir Harold Himsworth, Secretary of the M.R.C., and our then President, Dr. J. M. Gibson. The Society cordially welcomed the fact that its co-operation was sought and that there had been a preliminary discussion with Prof. Wilson, Dr. Charles Cockburn and Dr. J. Knowelden, in which useful practical ideas were exchanged.

The progress note now published confirms the information recently given by Dr. Cockburn when he attended a meeting of the Society's General Purposes Committee. The fact that the incidence of true poliomyelitis was much lighter during 1951 than in the two preceding years limited the material for investigation, so that only tentative conclusions could be drawn from the information obtained. But valuable experience has clearly been gained in the technique of investigation and this is being applied in the continuing enquiry.

We earnestly commend our members to continue their full co-operation in this investigation under the various lines mentioned by Prof. Wilson.

### Voluntary Service

A survey of "Voluntary Service and the State,"\* with particular reference to the needs of the hospital service, has been issued by the National Council of Social Service and King Edward's Hospital Fund for London. An advisory committee (which included such well-known authorities as Sir Wilson Jameson, Dr. Janet Aitken, Sir Edward Peacock, Dr. Keith Murray, and Lady Norman as chairman) has enquired into the future of voluntary activities in the hospital service. The director of the enquiry, Mr. John Trevelyan, O.B.E., M.A. (a former Director of Education for the County of Westmorland), has been responsible for a report which summarises observations and impressions from a large number of visits and interviews, and gives evidence of deep thought. All will agree that there is still need for the pioneer. Voluntary organisations have still an important part to play not only in pioneer experiments in social work but also with the considerable branch of work which is best carried out by "volunteers."

We are frankly surprised to read that at the present time, although there is a National Health Service financed almost entirely from public funds, there is more voluntary service given to the sick and infirm than ever before. Certainly we have noticed recently a small renaissance of activity of various "friends of the hospital" leagues, and similar societies, all of whose activities were definitely discouraged by more than one prominent politician not so very long ago. Now they have come to life again. There will always be a real desire (amounting in some individuals to a passion) to serve others, particularly the sick and infirm.

Those two great organisations the St. John Ambulance Brigade and the British Red Cross Society, as well as many other local and national bodies, have a real part to play in auxiliary services, in help with the blood transfusion service, the hospital library, in first-aid work, in the ambulance service, and a hundred and one activities in hospital canteens, sewing duties, visiting and shopping for patients. In the case of tuberculosis the National Association for the Prevention of Tuberculosis has long had a distinguished record of devotion to this work.

The motives in voluntary service are not always of course those of the highest. Humanitarian idealism, and a sense of duty towards one's neighbour are rare virtues. Many undertake voluntary work as an escape from personal problems such as loneliness, and the unused energy of people with too much time on their hands. Again, some volunteers do not always undertake work without reward. Those who wish to climb socially and increase the sense of their own importance as well as the careerist and exhibitionist, often find satisfaction in this work. Nevertheless, men and women showing the true spirit of service still have a great part to play. At its best, voluntary service is one of the finest features of our way of life. Not only in committee work but in friendly visiting of patients, in humble jobs such as staffing library or tea-trolleys, or taking patients for outings, or giving help and care to the sick and aged in their own homes—these are examples of a spirit of which we should be proud and which could exist only in a worthwhile civilisation.

To quote the report: "We believe then that the 'voluntary spirit' that inspires true voluntary service is something that is of the essence of greatness in man, and that a nation that fails to make use of this gift can never be a great nation. Such a nation will never succeed in killing the voluntary spirit in man, a spirit that has endured throughout the ages, but by putting it in chains it will be imprisoning the qualities that it needs most of its people."

Men and women go to great trouble in entertaining patients, even mental patients, and old people, or in taking them for an outing. They will patiently, without hope of reward, write letters for old chronic patients, who have no other friends. All of this work must continue, and indeed

\* Obtainable from the National Council of Social Service, 26, Bedford Square, W.C.1. Price 2s. 6d.



increase. But more people must be shown that they are needed before they will volunteer. Public-spirited citizens could well help, to quote the report, in activities such as "auxiliary nursing, orderly duties in the wards, sewing, help with serving meals, visiting, shopping for patients, legal and financial advice, trolley-shops, library services, and entertainments." The difficulties are often great. Apart from the fewness and suitability of the people to do the work, not all volunteers are welcome in hospitals. Voluntary activities need much space and facilities, e.g., for out-patient canteens and libraries in already overcrowded buildings. Nevertheless, such difficulties might be solved by "goodwill and efficiency on the part of the voluntary workers and the hospital staff."

Voluntary workers must have discipline and be prepared to offer effective work. They should be careful about time-keeping so that patients and paid workers are not kept waiting unnecessarily. They should also be thoroughly familiar with the routine in the department which they serve. On the other hand, the hospital or employing authority must give them the right facilities and use their services to advantage. A real partnership must be developed for the sake of the welfare of the patients.

In most local health authority areas, there are literally thousands of old people to whom the voluntary service would be the answer to their problems. Sitters-in and sitters-up, friendly visitors to the aged, are only some of the huge tasks which there is neither the staff nor the money to undertake properly from official sources. Many patients on leaving hospital need some care, either in their own homes or in recuperation centres.

### THE PUBLIC HEALTH SERVICE DEFENCE TRUST

In June, 1950, we drew attention in an editorial to the constitution of the British Medical Guild and the Public Health Service Defence Trust, for which the trustees are the members for the time being of the B.M.A.'s Public Health Committee. The appeal for the first annual contributions to the latter Trust went out in November, 1950, and we understand that it received a fair response, although it is clear that a proportion of the public health medical officers has not yet shown practical recognition of its existence. The appeal for the second annual contribution has now gone out to those who gave last year, and an appeal to make a start to those who have not yet done so.

In the view of the Society it is not only proper for, but also in the self-interest of, public health medical officers to support this Trust fund and the rate of contribution remains very moderate, i.e., 2s. per £100 of salary. The justification for the existence of such a fund has been shown during recent months, when it has been necessary to give financial assistance to certain medical officers who were sacrificing salary through loyalty to the policy of the profession in a dispute with a certain local authority.

### OBITUARY

PERCY HERBERT STIRK, M.R.C.S., L.R.C.P., D.P.H.

We record with regret the death at Bridgwater on March 13th, in his 85th year, of Dr. P. H. Stirk, who was Medical Officer of Health and School Medical Officer for the City of Exeter from 1908 to 1933. He qualified from University College Hospital in 1893 and took the D.P.H. in 1911. At the time of Dr. Stirk's retirement the Chairman of the Health Committee said that he had entirely created the City's health services and this was true of him and of his contemporaries as it can no longer be of the present generation of Medical Officers of Health, which has taken over a framework of services built up by its predecessors.

Dr. Stirk was a loyal and active member of the Society and served many years as Hon. Secretary of the West of England Branch, which he also represented on the Council of the Society. He leaves a widow to whom we extend our sympathy.

### ON LOWERING THE MORTALITY RATE FROM CANCER\*

By CATHERINE B. CRANE, M.B., D.P.H.,

Medical Officer of Health, City of York

One in six over the age of 35 die from cancer, and this disease, whilst occupying third place in the list of principal killing diseases in 1929, now occupies second place.

It has been my privilege to be a member of the Yorkshire Branch of the Society since 1936, and of the County Borough Group of the Society since 1946, yet I cannot recollect any meeting of either Group where the problem of cancer and the possibility of lowering its mortality rate in this country has been the subject for discussion. Furthermore, I am unable to trace any paper on this subject in the proceedings of the Royal Sanitary Institute since 1940, when John Buchan wrote on "Administrative Problems involved in connection with the Cancer Act," and MacNalty on "The Cancer Act, and the Duties which will be imposed on Local Authorities"—neither dealing directly with the possibility of lowering the mortality rate. There has been considerable correspondence on "Publicity for Cancer" in *The Lancet* following Prof. Russ's letter of March 24th, 1951. Apart from a letter by our good friend Dr. Roe, of Halifax, however, on the alleged epidemiological connection between smoking and cancer of the lung, contributions to medical journals by members of the Public Health Service during recent years on this most important subject have been conspicuous by their absence. The recent leading articles in the Public Health section of *The Lancet* on "Cancer Education of the Public," by Raven and Gough Thomas, and Beresford and Watson,† and an excellent article in *The Medical Officer* on the same subject by Malcolm Donaldson,‡ were all written by clinicians. Why this hesitation on the part of Medical Officers of Health to educate the public, and to attack the problem of cancer by every available means at their disposal?

I am convinced that as much interest still exists in this problem in public health circles as existed during the decade 1920-1930. You will remember that in 1922 a Standing Departmental Committee of the Ministry of Health was appointed, and the British Empire Cancer Campaign was founded. The terms of reference of the Departmental Committee were "To consider the available information with regard to incidence, causation, prevalence and treatment of cancer, and to advise as to the best methods of utilising the resources of the Ministry for the study and investigation of these problems." (The recorded death rate at this stage was seven times what it had been in 1838.) This Departmental Committee appointed five sub-committees, two of which were directly concerned with the public health aspect. These two were:—

(1) Propaganda and public action.

(2) A committee of Medical Officers of Health "To consider the social conditions and environment of cancer cases, and the treatment facilities in a sanitary area."

Compare this with the constitution of the present Standing Cancer and Radiotherapy Advisory Committee of the Central Health Services Council. What is the public health representation on that committee?

The present reluctance on the part of public health medical officers to educate the public must chiefly be due to the fear of increasing cancerophobia, and yet as long ago as 1923 the report of the Chief Medical Officer refers to "The demand for information on the part of the lay public," and a circular to local authorities of the same year to "the need for further educative action whether designed for the benefit of the lay public or of the medical profession." (This is the first reference I can find to any need to educate the medical profession.)

\* Presidential Address to the Yorkshire Branch, Society of M.O.H., Leeds, 26th October, 1951.

† *Lancet* (September 15th, 1951), 2, 495, 496.

‡ *Medical Officer* (September 9th, 1950), 84, 119.

In 1925 the Chief Medical Officer referred to the increasing interest which was being shown in this subject. "Until a few years ago," he said, "the interest of laymen had unfortunately been restricted to its effects within his immediate circle of acquaintances, this interest being not merely of a negative order, but amounting to a positive disinclination to mention or discuss the disease. Fortunately, this attitude is disappearing, so that now it has become possible for this disease to be as freely discussed as tuberculosis."

In 1924 local committees were set up in several of the larger County Boroughs for the study of cancer, and in December, 1925, the Yorkshire Council of the British Empire Cancer Campaign was founded and issued an appeal for £75,000 for research work in the county. In 1926 the Chief Medical Officer again emphasised the awakening of public interest, and the Yorkshire Council founded its cancer research centre in association with the University of Leeds. That same year a series of 12 post-graduate lectures on cancer were organised in Manchester, and Major Greenwood and Janet Lane Clayton in their estimate of reducible mortality gave substantial reasons for holding that it was quite possible annually to save many thousands of lives of people who otherwise would die from cancer. That was in 1926. What practical contribution have we in the public health branch of the profession made towards implementing this during the subsequent 25 years?

Between 1923 and 1930 the importance of cancer as a public health problem was demonstrated by the fact that no fewer than 17 memoranda and official publications on cancer were issued. This growth of interest and intensity of action was maintained throughout the next decade, and crystallised in the Cancer Act of 1939. This, coinciding with the war, appears effectively to have sterilised further action on the part of local authorities. In 1929 the Chief Medical Officer reported, "Public Health Authorities as a whole in England and Wales can hardly yet be said to be contributing their proper share to the investigation and control of the disease." That was 1929. What is the position to-day?

There are two problems which confront us when considering the advisability of organising a campaign to lower the mortality rate from cancer:—

- (1) To educate the public.
- (2) To help the general practitioner to do the right thing when the patient calls.

If we in Yorkshire are to play an effective part in such a campaign, then a broad knowledge of the natural history of the disease, the history of research, and the present position, particularly in our own area, is fundamental.

Cancer occurs in all parts of the world, and in all vertebrates. It is *not* essentially a disease of civilisation. The disease was mentioned in Egyptian papyrus 1500 B.C., and Hippocrates distinguished separate clinical types. The recognition of occupational cancers caused by extrinsic cancer producing agents started in 1775, when Percival Potts described cancer of the scrotum in sweeps due to soot. About a century elapsed, however, before further occupational tumours were recognised. Modern research may be said to have started with the establishment of the microscope and the study of cellular pathology about a century ago. At the end of the last century, the earliest successful attempts at transplantation of cancer in animals occurred, and early in this century there were many unsuccessful attempts to discover a causative organism of the disease. The sequence of facts as established by research was (1) tumour transplantation by means of living cells; (2) the discovery of tissue culture; and (3) the subsequent proof of species specificity leading up to Peyton Rous's discovery of 1911. He described a sarcoma in fowls which was transmissible from bird to bird by means of a cell-free filtrate of the tumour. This was acclaimed by one school of thought as proving the infectivity theory, and transmission by means of a living virus. This theory was strongly opposed by another school of thought, however, and while viruses are associated with certain special

types of cancer in man and animals, there is no proof that they play any part in the commoner types of human cancer.

In 1915 two Japanese workers produced the first experimental cancer by painting the skin of rabbits with coal tar, and in 1934 Peacock and McIntosh showed that tar derivatives were active in producing sarcoma in fowls. One of these tumours was transmitted by a cell-free filtrate, but innumerable attempts to repeat this have failed. It is, therefore, generally believed that tar-induced tumours in birds are not filterable. The experiment was reproduced in mammals by Rous and Beard, who the same year transmitted skin-papilloma in "cotton-tail" rabbits by means of a cell-free filtrate. This is a peculiar tumour which is intermediate between benign and malignant.

About the same time as the Japanese work (1915-20), American research workers noted that if ovaries were removed from mice at an early age, then breast cancer did not develop in later life. It was 15 years before oestrone was identified as the potent hormone, and Lacassagne produced experimental breast cancer in mice by the injection of this hormone. This marked a new era in experimental research, and the treatment by stilboestrol of prostatic cancer followed later.

Prof. Kennaway's team in London isolated a carcinogenic substance from tar in pure crystalline form. Many similar carcinogenic substances have since been added to the list, and Berenblum states that it may be possible in future to predict whether a substance will be carcinogenic on purely theoretical chemical grounds alone.

It was shown in 1936 by Bittner that a milk factor is necessary in the production of breast cancer in mice, the incidence being related to the true mother, or to the foster mother, whichever happens to have the milk factor. It is difficult to believe that something which is transmitted by breast milk during infancy may later be a determining factor in the development of breast cancer. This is one of the most dramatic and unexpected discoveries ever made. It emphasises the lengthy latent period in human cancer, which may vary between 1 and 30 years, so that it is possible that a carcinogenic stimulus to the bowel in childhood may lead to the development of cancer in adult life.

The literature on the differences distinguishing cancer cells from normal cells is in itself encyclopaedic, and the present scope of cancer research apparently limitless. Workers in America, for instance, are systematically investigating all the known enzymes in normal and cancerous tissues, whilst the possible carcinogenic properties of dyes used in foodstuffs, and fat which has been repeatedly reheated (e.g., that used for frying in fish and chip shops) may have far-reaching implications.

It is important that we should know of the research in our own region, and the annual report of the Yorkshire Council of the British Empire Cancer Campaign for 1950 gives a synopsis of research at Leeds and Sheffield. The most interesting recent work of these two research units from the public health point of view appears to be the experimental work of the Leeds unit on bladder cancer. This has provided information enabling preventive measures to be applied in the chemical dye industry with a view to limiting the risks of this industrial hazard. In Sheffield, possible clues to the essential nature of the transformation of normal cells to cancer cells are coming from research on shock. Cortisone (possibly A.C.T.H.) and shock, it is thought, check cell division by interfering at one or more stages with the body's utilisation of sugars and starches. Carcinogenic substances painted on to the skin of a mouse cause it to become refractory to this anti-mitosis action. Work is also being done in the region on the milk factor, the effects of internal secretions on tumours, investigation of so-called "cancer cures," and various other subjects.

Cancer research is of necessity slow, two and a half years for the result of an experiment being quick. Research at present is held up, not by lack of funds, but by lack of research workers. Two fellowships at Leeds alone have been vacant for the last two years and the problem of attracting workers into cancer research is a very real one.

If the means of prevention is dependent on knowledge of causation, then this shortage of research workers should fill us, as members of the Public Health Service, with grave concern.

Having reminded ourselves of the peak of enthusiasm which existed in public health circles over the problem of cancer from 1922 until the passing of the Cancer Act, and briefly reviewed the history of research, let us consider certain doubts and misconceptions which exist in the minds of the public:—

(1) *That the incidence of cancer is increasing in man.* There is no reliable evidence to support this claim, except perhaps in cancer of the lung. It is true that the recorded death rate increased from 0.32 per 1,000 living in 1851 to 1.9 in 1945, and that the recorded mortality was trebled in two generations. The effect of an ageing population and improved methods of diagnosis must, however, be offset against this. Improved diagnosis should lead to a greater apparent increase of cases in remote sites rather than accessible sites, whereas a true increase would be reflected in all sites. It is, in fact, in the remote sites that the recorded increase has occurred, whereas it has decreased in some of the accessible sites. There is, therefore, no reliable evidence that the incidence of cancer generally is increasing in man.

(2) *That cancer is an hereditary disease.* This is not proven. There is no single hereditary factor for cancer as a whole, but particular types, e.g., cancer of the breast, may show a slight hereditary influence. The strong genetic factor present in inbred strains of mice, e.g., that developed after 20 to 30 brother-sister matings for consecutive generations, when hereditary becomes a dominant factor, is unlikely to develop in man. This factor, then, if present at all, is so weak as to be of no significance.

(3) *That "cancer houses" and "cancer districts" exist.* This is a statement which is frequently made to me by my district nurses, but I am unable to trace any scientific evidence that this is so.

(4) *That cancer is infectious or contagious.* Not proven.

(5) *That chronic irritation or inflammation causes cancer "per se."* This is not so, although it is possible that they may lower the resistance of the affected tissues, thus making them more susceptible to carcinogenic substances. It has been shown on the other hand, however, that experimental carcinogenesis can be developed more easily in healthy animals than in sick animals.

Having cleared our minds of certain popular misconceptions, let us look at conditions as they exist to-day, and the part which local authorities might play in lowering the mortality rate from cancer.

It is generally recognised that, apart from occupational cancers where the cause is known, and possibly dealing with pre-existing abnormalities in the organs, nothing can be done to prevent the onset of the disease. Occupational cancers form but a small fraction of the whole, but of other cases one fact has been proved beyond all doubt. That is, that in patients suffering from cancer, the earlier the disease is treated the greater the chance of recovery.

Is there any evidence that patients are receiving treatment earlier to-day than they were 10 or 15 years ago? Figures from the Christie Hospital and Holt Radium Institute, Manchester, suggest the reverse. Of 236 cases of cancer of the breast treated in 1932 only 36 were seen at stage 1 (i.e., 15%), and in 1948 of 315 cases only 22 (7%) were stage 1. Similarly, for carcinoma of the cervix, of 236 cases in 1932 17 were stage 1 (7%), and of 317 cases in 1948 still only 17 (i.e., 5%) were stage 1. These are appalling figures, for whereas the average natural duration of the disease in cancer of the breast is three years, if treated early in stage 1 94% are alive and well after three years, 91.5% after five years, and 87% after 10 years. Figures from the Christie Hospital and Holt Radium Institute between 1940 and 1944 show in an analysis of 8,538 cases covering all sites that if treated early 62% were alive and well after five years, whilst only 16% survived in cases coming later for treatment.

The average delay figures in this country between the patient first noticing symptoms and attending for treatment in centres implementing the Radium Commission's registration scheme are as follows:—

	Months
Breast ... ..	6.0
Cervix uteri ... ..	5.7
Other uterine sites ... ..	10.3
Prostate ... ..	5.7
Skin (other than rodent ulcers) ... ..	7.5
Lip ... ..	5.6
Larynx and trachea ... ..	6.6
Rectum ... ..	5.6
Tongue ... ..	3.5
Urinary organs ... ..	6.0

Part of this delay is due to the patient not being admitted to hospital immediately application is made, but most of the delay is the interval between the patient first noticing symptoms and going to his doctor.

Surely, a concerted effort to educate the public could at least lower this delay rate. The Americans claim that by cancer education the Massachusetts Public Health Authorities have in 10 years reduced the interval between the patient first noticing symptoms and going to a doctor from six to three months.

In this country the Regional Hospital Boards and Boards of Governors are dealing with the admission delays and organisation of regional cancer services. Their schemes are well advanced and, unless we make it clear that we are prepared to tackle the problem of lowering the interval between the patient noticing symptoms and seeking advice, we shall find that the opportunity of educating the public has been taken from us and organised by another body. A Ministry of Health Circular of July, 1949, called upon Regional Boards and Boards of Governors to organise regional cancer services. In the Leeds region the preliminary work has been done by a Joint Cancer Committee of the Board, the Teaching Hospitals and the University, with the Technical Advisory Panel on Radiotherapeutics and Cancer, augmented by representatives of various specialities acting as the Joint Committee's technical advisers. There has been no public health representation on either of these committees. This was possibly unnecessary in the early stages, but, when the Cancer Services Co-ordinating Committee, as described in the Ministry's 1949 Circular, is set up, the Public Health Services should have adequate representation.

The aim of the Regional Cancer Committee to date has been to establish consultative radiotherapy clinics throughout the region at weekly intervals, and to develop a complete hospital registration scheme. At present Leeds, Bradford and the Dewsbury General Infirmary are the only hospitals in the area where there is a 100% registration scheme. There is partial registration wherever consultative radiotherapy clinics have been established. The work of developing the service is well in hand.

The Standing Cancer and Radiotherapy Advisory Committee of the Central Health Services Council have advised that it is undesirable at the present time for any cancer publicity to be carried out by the Ministry direct to the general public. They are of the opinion that confusion will ensue if this is undertaken before the general practitioners are ready for it. "There is no objection however" (to quote the report of the Council for 1950) "to local authorities referring to cancer in their general health propaganda." This is about as negative as it could be. "No objection to local authorities referring to cancer in their general health propaganda." One envisages the odd leaflets left on tables of dingy waiting rooms, not revised since publication in 1932, or the health visitor perhaps including reference to cancer as a very minor part of her education campaign—probably as an afterthought. And yet cancer occupies second place in the list of principal killing diseases. Is that to be our only contribution toward lowering the mortality rate?

Ten per cent. of the funds of the Yorkshire Council of the British Empire Cancer Campaign are available for educational purposes, but the only two local authorities which subscribe to this Council, I understand, are the West Riding County Council and Leeds County Borough. The Yorkshire Council have organised two week-end post-graduate courses on cancer since the war, but these have been poorly attended.

The Central Council for Health Education have published a suggested scheme for the education of the public concerning cancer. They have consulted numerous authorities, and had the co-operation of Dr. Malcolm Donaldson, late director of the Cancer Department at St. Bartholomew's Hospital and formerly chairman of the Clinical Cancer Research Committee and Cancer Education Committee of the British Empire Cancer Campaign.

Dr. Donaldson recommends the setting-up of local cancer committees with representatives of the local health authority, general practitioners, consultants and local voluntary organisations. As the main function of such committees would be educational, the initiative should be taken by the local health authority. Preliminary steps to secure the good will of the British Medical Association or local medical committee—also the Regional Hospital Board or its local Hospital Management Committee—should be taken. It is suggested that the scheme should be launched by the Mayor or chairman of the Health Committee calling a conference by personal invitation to delegates of local voluntary organisations, and the medical bodies previously mentioned. Out of this conference, the Cancer Advice Committee would develop. The aim of such committees would be to overcome fear in the public by true teaching, giving a balanced account of the position with emphasis on the good results which are obtained from early treatment. Teaching should be concentrated on the accessible sites where there is the greatest hope of lowering the mortality rate, e.g., breast, uterus, skin, tongue, larynx, rectum.

Six films are being prepared for the Ministry of Health by the Central Office of Information for showing to general practitioner audiences. Three have been completed and the others are being made. They are "Skin," "Lip, Tongue and Mouth," "Larynx," "Rectum," "Breast," "Cervix and Uterus." Education of the general practitioners may be necessary, but the main responsibility for late diagnosis and waste of life undoubtedly lies with the patient and is due to fear and ignorance.

The possibility of lowering the mortality rate from cancer in remote sites is a greater problem. It is doubtful whether we yet have sufficient knowledge to include these sites in an educational campaign for the public. Take, for instance, carcinoma of the stomach. It is only by accident that really early gastric carcinoma is diagnosed. I am told by my friends the clinicians that many patients present themselves for the first time with a mild anaemia, and indefinite digestive symptoms. The anaemia and general condition respond to simple treatment for perhaps four or five months and then the patient deteriorates again. On full investigation a gastric carcinoma is diagnosed, but six months have been wasted. Are practitioners to send all patients with similar symptoms for full investigation at their first visit? If so, only 1 in 10, or fewer, would turn out to be carcinoma. Pathologists and radiologists would need to be convinced of the need for these examinations, and there is a danger that the practitioner instead of the patient might be labelled as cancerphobe.

There is another group, however, where unnecessary delay at practitioner level might be avoided. I refer to the patient who has needed considerable courage to visit her doctor, hits on a surgery with 20 or 30 patients waiting, and the practitioner, with or without examination, says "Come and see me again in a fortnight." The patient has not specifically mentioned her fear, but has had her mind put at rest by the fact that the doctor has made no reference to cancer. She does not attend again as asked, and the next time the practitioner sees her there is an

inoperable growth. Surely it should be possible to organise a follow-up scheme for these non-attenders at general practitioner level?

Two cancer committees have already been started in the south, and I would suggest that we in Yorkshire might well give a lead in the north. The greatest incentive would undoubtedly be a direct demand from the public for information, but we should not wait for that. To quote Prof. Russa: "If it can be shown that some lives can be saved by this means—i.e., by education of the public—then it should be asked of those who oppose the policy 'In what ways would harm be done if it were put into practice?'" —and Dr. Hilton, "Teaching the public may or may not produce a few more cancerophobes, but that would be a small price to pay in comparison with the number of lives we might save."

I should like to thank Dr. G. M. Bonser, of the Leeds Cancer Research Unit, and Dr. Malcolm Donaldson for their help in the preparation of this paper.

### THE ATOM STRIKES\*

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A great deal has been written on the effects of an atom bomb explosion in the American Medical Press during the last six years; relatively little has yet appeared in our own. It is probably fair to say that because of this the Canadian and American medical public as a whole are more aware of current views on the problems confronting us than we are.

In England during the period 1939 to 1945 there were about 60,000 killed and 80,000 injured. In Hiroshima one bomb killed 66,000 and there were 80,000 injured out of a total of 255,000. These are conservative estimates. The immediate reaction to these figures is to say Japanese buildings do not compare with ours and that our casualties would be nothing like that. Statisticians' figures on property damage were: 62,000 out of 90,000 buildings destroyed and 6,000 more damaged beyond repair. In the heart of the city they found only five modern buildings that could be used again without major repairs. This small number was by no means the fault of flimsy Japanese construction. In fact, since the 1923 earthquake Japanese building regulations had required that the roof of each building be able to bear a minimum load of 70 lb. per square foot whereas ours require 40. Estimates of casualties in an average English town are, with warning, 6,000 killed and 8,000 to 10,000 live casualties; without warning, the number killed might be expected to exceed 30,000.

### Relevant Physics

Before proceeding to discuss how these casualties will be caused, I think I should mention some relevant physics of nuclear fission. I do so with diffidence and hope that no one in the audience will be deceived by error of fact or inference which I may make on this aspect of my subject.

What we call atom smashing the scientist of the Middle Ages called transmutation, a change in the kernel of the atom so violent that its elementary nature is altered. In the Middle Ages the problem was the conversion of metals into gold, the creation of riches from poverty. Unfortunately, the forces required are so great that the alchemists could not possibly have been successful. It was not until 1919 that Rutherford, at Cambridge University, for the first time actually broke through the impenetrable barrier around the atomic kernel and succeeded in making one element from another.

The atom consists of a positively charged nucleus with negatively charged electrons revolving around it in pre-

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scribed orbits. They can be pictured as revolving round it rather like the planets round the sun but held in place by the electrical attraction of opposite charges. The nucleus comprises neutrons with no charge, and protons with positive charges which equal the negative charges of the electrons. Neutrons and protons are bound together by the nuclear force.

All atoms are built up of these three elementary particles. However, the number of neutrons in an atom is not necessarily constant. Atoms of the same element with different masses due to different numbers of neutrons in the nucleus are known as isotopes. There is more than one isotope of every known element.

If an electron revolving in one of the outer orbits about the nucleus is knocked off the atom is then minus one negative charge; it is, therefore, positively charged and said to be ionised. This knocking off of an electron may be accomplished by alpha and beta particles, gamma rays or neutrons.

In 1939 it was discovered that when a rare isotope of uranium U235 is bombarded with neutrons it may absorb one of them and immediately become so unstable that the atom splits approximately in half. An enormous amount of energy is released as the two halves fly violently apart, while of equal importance is the fact that two or more neutrons are released at the time to repeat the process.

It looks as though a lump of U235 would explode violently. It does, in fact, constitute a bomb provided it is pure enough and greater than a certain critical size. Size is important because if the lump is too small the surface is increased relative to the volume and too many neutrons will escape. It follows that a lump of U235 below the critical size will be safe for an indefinite time, but as soon as the critical size is passed it will become a bomb. Just how this is done is a close secret. Actually, U235 is rather old-fashioned. A more satisfactory one is the artificial element, plutonium, which is made by bombarding the abundant 238 isotope of uranium with neutrons in the atomic pile.

### The Explosion of the Atomic Bomb

When the atomic bomb is detonated, an amount of energy is released within a millionth of a second, which has been stated to be equivalent to that from 20,000 tons of TNT. This energy is represented in the first place by the velocity of the fission products as they fly apart, but it is immediately translated into heat and mechanical effects. The temperature in the immediate neighbourhood is raised to several million degrees centigrade and is comparable with that existing in the interior of the sun. The first result of this high temperature is the emission of radiant energy mostly in the ultra-violet visible and infra-red zones.

At the same time the velocity of the molecules concerned raises the pressure in the centre to somewhere in the order of half a million tons to the square inch. The result is a pressure or blast wave spreading out from the centre at first at over a mile per second, and finally settling down to the velocity of sound.

The first sign that anything is happening is a brilliant flash of light, bluish-white in colour, corresponding to the enormous temperature. At Bikini it outshone the tropical sun by several times at a distance of 18 miles. The light is accompanied by a flash of radiant heat which lasts a second or two after the intense brilliance is over and, in Japan, was capable of starting fires at a distance of nearly 2 miles.

The pressure wave is released, the fire ball rushes upwards into the stratosphere and is replaced by a mushroom-shaped cloud of white vapour, which eventually reaches the diameter of 2 miles and persists for many hours. All this time the cloud is giving off ionising radiation. The bulk of the radiation is emitted during the first second after the explosion. Of the type of radiation given off, alpha and beta particles only have a range of a few feet. Neutrons, which have a range of about 700 yards, are not likely to be a serious independent hazard since anyone within that

distance of an air burst would almost certainly be killed very quickly by heat or gamma radiation.

Neutrons have, however, one property which we must bear in mind, that of producing transmutation. Any atom which captures a neutron is transformed into a higher isotope which is quite likely to be radio-active. Thus, if neutrons are captured by the sodium of sea-water the radio-active isotope NA24 is formed. We are left with gamma rays which have an indefinite but very long range in air. Their intensity was such, in Japan, that some people were killed by them half a mile from the burst.

Casualties produced by the air burst are due to heat radiation, blast and mechanical effects and gamma radiation.

**Light Flash.**—The intense light at the earliest stage could certainly cause temporary blindness at a distance of several miles to an observer with the eyes unprotected. Recovery may take a few minutes or up to several hours. At close range the light is intensely rich in ultra-violet and damage to skin is due to this component.

**Heat Flash.**—Primary effects due to the almost instantaneous heat flash must be distinguished from secondary fires due to such causes as burst gas pipes, overturned stoves and wind spread of burning debris.

The most devastating part of the heat flash is over in a small fraction of a second which is not long enough for deep burning. Light coloured objects reflect most of the heat while dark coloured objects will be more severely burned. Outside a range of a mile thin material is sufficient to protect the skin from heat flash provided it is of light colour.

Among human patients in Japan burns occurred up to a distance of 2½ miles, but were slight at over half that distance. Within 1,100 yards the whole thickness of the skin was burned and there was some damage to the internal organs. Death occurred almost instantaneously in such cases.

Wooden buildings were ignited up to a distance of 2 miles. At greater distances there were no primary fires but there were many secondary ones. Within a range of half a mile the heat was sufficient to roughen granite structures by melting the surface layer and to produce bubbles on roofing tiles.

**Blast.**—The enormous pressure at the centre of the blast is dissipated as the blast-wave which starts at over half a mile per second but soon settles down to the speed of sound. It differs from the blast of high-explosive. The blast of H.E. passes swiftly, followed by a period of negative pressure during which buildings are sucked towards the explosion. The blast wave of an atomic bomb takes a second or so to pass, which is long enough for buildings to be pushed outwards from the blast.

The blast wave was responsible for casualties through people being thrown about or being injured by falling masonry or flying glass. Injuries from these causes occurred, with varying frequency, up to a distance of at least 5 miles from the burst.

Structural damage included the collapse of reinforced concrete buildings, which had been strengthened to resist earthquakes, at a distance of half a mile. Brick buildings collapsed up to nearly a mile and were cracked at a mile and a half. Slight damage was seen up to 3 miles in the form of loss of roof tiles, plaster off ceilings and displacement of doors and windows.

**Nuclear Radiation.**—The significant nuclear radiations from the air burst consists of gamma rays and neutrons. It is impossible to say how many casualties were due to ionising radiations. Deaths in Japan due to gamma rays alone have been variously estimated at between 7 and 20% of the total.

#### Total Damage and Casualties.—

At Hiroshima there were	66,000 dead
" "	80,000 injured
At Nagasaki	" " 39,000 dead
" "	" " 25,000 injured

Among those people who were within half a mile of the burst the death-rate was over 90%, between ½ and 1 mile it was 50%, between 1 and 1½ miles about 20%. Beyond



a mile and a half the death-rate was not more than 1%. So far as could be determined about 60% of the deaths were due to burning, about 20% to falling debris, and the rest to other causes, including gamma rays.

The British mission to Japan estimated that a similar bomb exploding in a similar fashion would produce the following effects on buildings in an English town:—

1. Up to 1,000 yards from the centre it would cause complete collapse.
2. Up to a mile it would damage houses beyond repair.
3. Up to a mile and a half it would render them uninhabitable without extensive repairs, particularly to roof timbers.
4. Up to 2 miles and a half it would render them uninhabitable until first-aid repairs had been carried out.

**Under-water Burst.**—It is possible that towns near deep water may be effected by an under-water burst. Our only experience of this was the second Bikini experiment. Owing to the position of the explosion all the heat flash, all the immediate nuclear radiation and most of the air lost were absorbed by the water. To compensate for this, immense damage was done by the under-water blast and the fission products, which were entirely absorbed by the water and made everything where they came to rest radio-active.

There was a flash as the fire ball broke surface and went upward in the way previously described. The flash of light could not compare in luminosity with that from the air burst. A column of water with a straight stalk and cauliflower head was seen moving rapidly upwards to a maximum of  $1\frac{1}{2}$  miles.

**Base Surge.**—Immediately after the maximum height was reached the column of water, about two million tons of it, began to fall, dragging down an enormous volume of air. As this mixture of air and water began to reach the surface a phenomenon appeared which was quite unexpected. From the base of the column arose a white ring, at first about 300 ft. high but later towering above 2,000 ft. This ring began to roll outwards at a speed of 50 m.p.h. but later settled down to 20 m.p.h. It soon became apparent that it was a ring of mist to which the name Base Surge has been given. The surge travelled down wind, rolling over all objects in its path and eventually covering an area of five square miles. Within 20 minutes it was gone, but the damage was done. The droplets of water were loaded with fission products and wherever they came to rest radio-active material was absorbed by the structures. It was not safe to board them for several days, by which time it was too late for attempts at decontamination to be completely successful.

Water waves travelling at about 50 m.p.h. arrived at a beach  $3\frac{1}{2}$  miles away where breakers formed 15 ft. high and some damage was done to boats, etc., on the foreshore.

The results of the test seem to indicate that the under-water burst will depend for its effect rather on casualties produced by the base surge than on structural damage produced by blast. But it has one serious limitation. It is almost certain that a base surge will not be produced unless there is sufficient depth of water probably greater than that found close inshore in this country.

**Protection Against Radiation.**—In order to minimise the effects of radiation, it is necessary either to keep out of the way or to interpose an absorbing medium between oneself and the source.

**Effect of Distance.**—As one would expect, gamma rays obey the inverse square law just like light. This means that if we double the distance from the source the intensity of the radiation falls to a quarter.

**Shielding Substances.**—If we have to dispense with the protection provided by mere distance and rely on shielding materials, it is necessary to know how much protection they will give.

The permeability of a substance to gamma rays varies with the wavelength of the radiation in question, but, roughly speaking, the degree of protection is proportional to the amount of matter interposed and hence to the specific

gravity of the material. The shielding materials most likely to be used are: Lead, sp. gr. 11; iron or steel, sp. gr. 7; concrete, sp. gr. 2.7; earth, sp. gr. 2; water, sp. gr. 1. The value of most building materials is about the same as concrete and that of wood is about the same as water.

**Protective Action.**—If there is any reason to expect an atom bomb, the method of protection differs in no way from that of any other attack. Every person who is not urgently needed in the open should take whatever cover he can. If the bomb bursts unexpectedly much damage will be done before there is time to take cover. The light and heat and nearly all the radiation will be received in less than a second. However, there will be a smaller amount of radiation for many seconds after the burst, and the blast which travels at the speed of sound will take a few seconds to reach a distance. At a great enough distance it is possible to escape some of the later radiation and all the blast by taking cover at once. Damage by falling objects will depend on where one takes refuge but there will not be much time to choose.

**Work in Contaminated Areas.**—Anyone who enters an area contaminated with fission products exposes himself to two dangers. The first, from external gamma radiation, must be accepted, but it is transient and will cease as soon as he leaves the area and takes off his contaminated clothes. If he is suitably dressed he will run very little risk from beta particles. The second danger is that radio-active substances may be absorbed into the body by inhalation and swallowing. Once absorbed they cannot be removed by any known method. Stringent precautions can and must be taken to stop this happening.

**Decontamination.**—The problem of rendering articles safe for use after contamination with radio-active materials is very different from that which arises where mustard gas is concerned. Radio-activity is not affected by any chemical change and nothing short of the complete removal of the offending atoms will serve.

**Hands and Body.**—Soap and water or 5% citric acid.

**Clothing.**—Special and repeated washing.

**Impermeable Surfaces.**—Early hosing; later, citric or oxalic acid.

**Wood.**—Treat with impermeable paint.

**Roads.**—Once contaminated, cover with earth, change as necessary.

**Disposal of Waste.**—Disused plots; areas of waste ground not accessible to the public. Note danger of contaminating underground water supplies.

**Contamination of Food and Water Supplies.**—This a quite likely hazard. Food in tins is safe if the tin is well washed. Meat, fats and cheese in wax-paper are fairly safe. If necessary, remove  $\frac{1}{2}$  in. all round. Bread, flour, cereals need monitoring and (?) disposal. Water from a deep well is probably all right.

Reservoirs might be dangerous and should be monitored. Distillation would make water quite safe for drinking.

**Monitoring Instruments.**—Gamma radiation cannot be detected by any immediate effect on the human body. To detect and measure it, instruments have to be used. These are called monitoring instruments. Similarly, contamination of ground, buildings or people by radio-active fission products can only be detected by looking for the radiation that is given off. Here, again, instruments have to be used. After an atomic explosion medical officers will wish to know:—

- (i) The total loss of gamma radiation delivered at various points.
- (ii) The dose rate due to residual radio-activity.
- (iii) Whether people are contaminated with fission products.
- (iv) The total dose received by individuals working in contaminated areas.
- (v) And whether air and water are contaminated.

Instruments have been designed to give the answer to all these questions.

### The Defence Organisation

This is in the hands of the area Civil Defence officers, who are organising courses for volunteers for rescue, demolition, decontamination, etc.

Apart from such instruction, preparation must be made for an emergency should it occur. This, again, is in the hands of various government departments and it is not my purpose to detail their plans but only to outline their problems.

These include :—

- (i) The dispersal of as many people as possible from the target areas.
- (iii) The preparation of deep shelters or reinforced concrete surface type. Anderson shelters would be of some value.
- (ii) The giving of adequate warning.
- (iv) Stock pile. Large supplies would be needed in a hurry and must be easily accessible.
- (v) To arrange for alternative lines of communication. Communications are likely to be completely disrupted.
- (vi) To arrange for emergency accommodation which will be needed.
- (vii) The transference of staff to affected areas—a likely possibility.
- (viii) Preparations must be made for a large number of casualties.

In this short paper I have attempted to give some idea of the problems an atomic bomb brings to the unfortunate people attacked. It is obviously the merest outline designed to stimulate interest in an unpleasant subject. It is in no way intended to alarm but given rather in the belief that a problem understood is more easily met and defeated. Should England be so unfortunate as to be the subject of such an attack we will have one incalculable advantage over the Japanese. We will know what has hit us.

### BOOK REVIEWS

**A Synopsis of Hygiene** (Jameson & Parkinson), 10th Edition. By LLYWELYN ROBERTS, M.D., M.R.C.P., D.P.H., with the assistance of KATHLEEN SHAW, M.B.E. (Pp. 891. Price 42s.) London: J. & A. Churchill Ltd. 1952.

It is difficult to realise that five years have passed since the ninth edition of "Jameson & Parkinson." Dr. Llywelyn Roberts, a distinguished former pupil of the original authors, has now taken over the main task from Brig. Parkinson, but Miss Shaw, of the London School of Hygiene and Tropical Medicine, continues the active association of the book with the School as she did in the last edition.

It is a wise step to have entrusted this latest edition to the hands of a serving M.O.H. of a large county borough, since it is the first to appear in the new era of the National Health Service and other recent Acts with all their revolutionary effects upon the old order of the health services. The change is shown in chapter headings only by the introduction of a new Chapter IV entitled "Care of (a) persons suffering from mental illness or mental defectiveness, (b) the blind and (c) the deaf," but the N.H.S.A. developments are particularly dealt with in Chapter II, which now includes a full description of the Hospital Service developments and a section on Health Centres, giving a full plan and description of the L.C.C. venture at Woodberry Down, now approaching completion. All new legislation of the past five years is summarised and once again Jameson & Parkinson must rank as amongst the best and certainly the most up to date of the text-books for the student of public health and an essential reference book for the library of the Public Health Department.

**Infant and Child Care.** By W. H. S. WALLACE, M.D., D.P.H. (Pp. 215. Price 10s. 6d.) London: Cassell & Co., Ltd. 1951.

The aim of this book is to provide "a guide for mothers, nursery nurses and all in charge of young children," and it has been planned to cover the syllabus for the Nursery Nurses Examination of the Royal Sanitary Institute.

In recent years the stream of books on child care has been in full spate, but the author justifies his contribution by writing with commonsense and refreshing simplicity. There is a fine

balance in his advice, allowing for flexibility in routine, without countenancing the complete freedom which leads to bewilderment. There are chapters on normal development, and the feeding and care of children up to the age of five years, with a particularly valuable one on weaning and the feeding of older babies. The sections on day nurseries and health services for children will be of special interest to nursery students.

Perhaps too great a proportion of space is devoted to minor ailments and infectious diseases (90 of the 208 pages), and more might have been said on problems of management, which are so vital both to parent and child: though there are good paragraphs on example and discipline. The subject of play and occupation is dealt with only briefly. In spite of these somewhat minor criticisms, this book can be recommended with sincerity.

**Hygiene, Infectious Diseases and Dietetics.** By DENIS H. GEFLEN, M.D., D.P.H., and SUSAN TRACEY, M.R.C.S., L.R.C.P., D.P.H. (Pp. 276. Price 9s. 6d.) London: Longmans, Green & Co. 1952.

This text-book is written primarily for nurses and follows the syllabus of the General Nursing Council for the State Registered Nurses' Certificate. The subjects of hygiene, infectious diseases and dietetics are presented in a practical manner, and the book will prove a useful addition to the study library of nurses and other students of these three subjects. It provides up-to-date information clearly and concisely. It is, in fact, a masterpiece of brevity without omitting essential details, and is most readable.

**Modern Practice in Tuberculosis.** Edited by T. HOLMES SELLORS, M.C.H., F.R.C.S., and J. L. LIVINGSTONE, M.D., F.R.C.P. (Two volumes, price £7 7s.) London: Butterworth & Co. (Publishers), Ltd. 1952.

The editors of this 796-page symposium aver that it is intended "for the reader already conversant with standard views and practice," to provide him with the "rapid advances in treatment notably in chemotherapy and surgery and socio-economic aspects." Advances in chemotherapy have already overtaken this book which comprises 39 essays by almost as many first-class authorities on various aspects of tuberculosis. Each author appears to have been given complete freedom to write what he would and few, fortunately, have restricted themselves to "advances" only. More editing might, however, have improved the weave and produced a more coherent pattern in the presentation. There are 26 essays dealing with medical and surgical therapeutics, four on sociological aspects, three on epidemiology, three on pathology and bacteriology, two on radiology in tuberculosis, one on B.C.G. vaccination and, presumably for good measure, an essay on sarcoidosis. The latter together with the chapters on tuberculosis of the eye and of the skin might with advantage have been replaced by essays on tuberculosis in children, in pregnancy, in diabetics, in mental defectives and asylum inmates and on tuberculin surveys and contact surveillance.

It was disappointing to find erythema nodosum as a manifestation of primary tuberculosis dismissed after only five lines. The chapters which can be specially commended to the public health worker are those entitled "Tuberculosis in Industry," "Administrative and Social Aspects," "Bacteriology," "The Tuberculosis Calendar," "Seed and Soil" (this an excellent survey of views on infection, environment and resistance), "Tuberculous Pleurisy," "The Tuberculosis Colony," "B.C.G. Vaccination" and "Tuberculosis of Bones and Joints." Other specially well written essays are on "Tuberculosis of the Central Nervous System," "Radiology in Tuberculosis" and on the various forms of lung collapse therapy.

This is a book which can be read with interest, with pleasure and with benefit equally by the tuberculosis specialist, the public health practitioner, paediatrician, general physician, thoracic surgeon and the pathologist.

### Hygienic Food Handling

The St. John Ambulance Association has introduced a new course of instruction and examination styled "Hygienic Food Handling." The course is based on the Hygiene Textbook of the Association "Public and Personal Hygiene" by Prof. F. A. E. Crew, price 2s. 3d., by post 2s. 5jd., and on a special manual entitled "Hygienic Food Handling," price 1s., by post 1s. 2jd., which has been approved by the Ministry of Health and Ministry of Food. This course does not cut across the splendid work being done by local authorities, Clean Food Guilds, the Central Council for Health Education, and the managements of some food establishments and catering establishments. The Association realises that it must, can and will work in the closest co-operation with all these bodies, but it feels that its course can make a real contribution in the drive for cleaner food by offering an organised course of instruction followed by an examination and the award of a certificate.

**NORTHERN IRELAND VITAL STATISTICS, 1951**

The Registrar-General for Northern Ireland, in announcing the mortality figures for the year 1951, states that the death rate from tuberculosis and the maternal mortality rate are the lowest ever recorded. The general death rate increased from 11.6 to 12.8 per 1,000 of the population, mainly as a result of the severe epidemic of influenza which broke out in the first quarter of the year; in fact, nearly 40% of the total deaths for the year occurred in that quarter. The infant mortality rate of 41 per 1,000 live births is lower than that of any earlier year with the exception of 1950.

The birth rate works out at 20.7 per 1,000 of the population. It has continued to decrease steadily from the war-time peak figure of 24.2 in 1943, but has not yet fallen to its 1939 level of 19.5. The marriage rate now shows a slight upward tendency at 6.8 per 1,000 of the population after falling slowly from a high war-time figure of over nine per 1,000 in 1941.

A survey of the past 25 years reveals some striking changes. Since the year 1926, infant mortality has fallen from 85 to 41 and maternal mortality from 5.6 to 1.1 per 1,000 live births.

The death rate from tuberculosis has fallen from 147 to 45 per 100,000 of the population, a reduction of over two-thirds. As regards diphtheria, only two deaths were recorded in 1951 as against 125 in 1926, whilst the number of cases of this disease notified fell from 1,263 to the strikingly low figure of 17.

The general death rate fell from 15 per 1,000 in 1926 to an average of 11.8 per 1,000 for the past four years. On the other hand, the death rate from cancer has risen from 112 to 148 per 100,000 population. This latter figure is, however, somewhat below that recorded in 1950. Further, statistics which appear to indicate that deaths from a particular disease are increasing may perhaps be a little misleading. The apparent increase is sometimes partly due to growing accuracy in the diagnosis and certification of the disease, and this may well be true in connection with cancer.

**EMPLOYMENT OF OLDER MEN AND WOMEN**

The National Advisory Committee on the Employment of Older Men and Women held its first meeting on April 2nd under the chairmanship of Sir Peter Bennett, Parliamentary Secretary to the Ministry of Labour and National Service.

The Committee, which is representative of both sides of industry, Government departments, local authorities, medicine, research, social science and welfare, was welcomed by Sir Walter Monkton, Q.C., Minister of Labour and National Service. The Minister said "The Committee has a very difficult problem to deal with and not one which will be solved quickly—not less than the need for a complete revolution in social and industrial practice as regards retirement from work. The aim must be that people willing and fit for work should not be denied the opportunity to work on account of age alone." He pointed out that the problem required action on a broad front and would not be solved by Ministerial pronouncements or by the issue of leaflets. Sir Walter hoped that much good would come from the formation of closer links between the many interests represented on the Committee so that all may move forward in their respective fields towards a common objective.

The Committee devoted their first meeting to a review of the problem generally and the contribution which could be made to its solution by the various interests represented. In preparing their plan of work the Committee decided to give first consideration to retirement policy in industry and commerce including the effect of pension schemes. Subsequently the Committee are to consider a paper on medical and scientific aspects.

The next meeting of the Committee will be held on July 3rd, 1952.

**REGISTERED BLIND PERSONS**

During the year ended March 31st, 1951, the number of registered blind persons in England and Wales increased by 2,144 from 81,320 to 83,464. Of this increase, 1,906 were aged 70 and over, probably a reflection of the general trend towards longevity.

Registered blind persons in employment were 9,858, an increase of 223, and those undergoing training totalled 742. Of the 9,858 employed blind persons, 4,573 were engaged in special workshops or in their own homes. Over 40 occupations are followed by blind people. Basket-making heads the list with 1,350 workers, followed by factory operatives (952, of whom 929 were in open employment), machine knitters (742) and brushmakers (660). Other blind people include agricultural workers (123), gardeners (73), clerks and typists (305), office executives (34), school teachers (39) and ministers of religion (46).

Homes especially established for the blind accommodated 2,013, an increase of 213, and the number of blind people in other homes provided by local authorities rose by 235 to 1,906.

New cases registered during the year totalled 11,155 or 505 more than in the previous year. The biggest increase (618) occurred in the age group "70 and over."

**PORTABLE CLEAN FOOD EXHIBITION SETS**

During 1951 the Ministry of Health lent their three portable exhibition sets on Food and Drink Infections to 29 authorities for showing at Clean Food, Health and Civic Weeks throughout the country. Early in the year the forward bookings were such that a third set had to be ordered, and was ready by April. Requests from a number of local authorities had to be refused because no set was available for the dates given, and for the same reason the Ministry was unable to offer the set to other authorities known to be holding suitable weeks.

The sets have been entirely renovated and can again be borrowed by local authorities. Each set shows by means of pictures and small models how food can become infected by those who handle it and how a few simple precautions can guard against food poisoning. A set consists of three units, each occupying approximately an 8-ft. run (24 sq. ft.) and supported by three metal tubes 8 ft. 0 in. high, and can be arranged in a number of ways according to the site. There is no charge, but a local authority is expected to pay inward transport from the previous exhibition site or store and be responsible for erection, dismantling and repacking of the exhibits, which has been designed so that this can be done by unskilled labour under proper supervision.

Local authorities organising suitable exhibitions and who would like to book a set are invited to write to the Public Relations Division, Ministry of Health, Savile Row, W.1, giving dates; photographs can be sent on request.

**NEWSHOLME LECTURES**

A COURSE of three Newsholme Lectures, 1952, entitled "Medical Research—Its Methods, Problems and Social Significance," will be given at the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, W.C.1, by Sir Edward Mellanby, G.B.E., K.C.B., M.D., Sc.D., F.R.C.P., F.R.S., late Secretary, Medical Research Council, on May 14th, 15th and 16th, at 6.0 p.m. Syllabus: Lecture I: History—Methods—Individual and Organised Research; Lecture II: Achievements—Future Tasks and Objectives; Lecture III: Scientific, Social and Political Impacts. Admission free, without ticket.

**RETIREMENT and WIDOWS' PENSIONS**

A special scheme has been devised by the Scottish Amicable Life Assurance Society whereby it is possible to provide a widow's pension or to supplement any pension to be received under the

**LOCAL GOVERNMENT OR NATIONAL HEALTH SERVICE SUPERANNUATION SCHEMES**

You are invited to enquire, without obligation, to the Secretary for full particulars, stating date of birth of yourself and your wife.

This scheme is particularly suited to those concerned about widow's pension in the event of death while in service.

Address your enquiries to:—

**The Secretary,  
Society of Medical Officers of Health  
Tavistock House South, London, W.C.1**

## SOCIETY OF MEDICAL OFFICERS OF HEALTH

## NOTICES

## SERVICES GROUP

*President:* Surg.-Capt. D. Duncan, O.B.E., R.N.

*Hon. Secretary:* Col. G. M. Frizelle (Asst. Dean, London School of Hygiene and Tropical Medicine).

The next meeting of the Group will be held in the Council Chamber, Birmingham, on Friday, May 16th, 1952, at 2.15 p.m. This will be preceded by a lunch in the Midland Hotel at 12.30 p.m.

The meeting will be devoted to discussions on the inter-relationship of the work of the School, Service and Industrial Medical Officers regarding National Service men entering and leaving the services.

It is hoped that the Lord Mayor may be free to welcome the members, who are particularly requested to be seated by 2.10 p.m. The meeting will be opened by Dr. Donald Stewart, Chief Medical Officer, Austin Motor Company, Ltd., and other papers will be read by: (a) Dr. H. M. Cohen, School Medical Officer, City of Birmingham; "The School Health Service: The Final Phase"; (b) Lt.-Col. R. W. Scott, O.B.E., R.A.M.C., "Some Health Aspects of National Service"; (c) Dr. J. A. Duncan, Medical Officer, I.C.I. Metals Division, "Youth in Industry: To National Service and Back." A general discussion will follow from 2.45 to 4.30 p.m.

Return trains to London (with restaurant cars) are Snow Hill 4.50, arrive Paddington 7.5; New Street 5.0, arrive Euston 7.40. Rail tickets available on either line on return journey.

As this will be the first meeting of the Group to be held outside London, members resident in the Midlands and North are asked to make every effort to attend. The most convenient station for the Midland Hotel is New Street.

The cost of the lunch, exclusive of wines and gratuities, will be 14s. 6d. per head. Members wishing to attend are requested to notify Dr. W. R. Martine, O.B.E., T.D., Public Health Department, The Council House, Birmingham, 3, not later than first post on Thursday, May 15th.

## TUBERCULOSIS GROUP

A meeting of the Group Committee will be held in the Society's Committee Room, Tavistock House South, London, W.C.1, on Friday, May 16th, 1952, at 10 a.m.

The Annual Meeting of the Group will follow at 12 noon after the election of officers and committee in the ensuing session.

R. G. MACQUEEN,  
*Hon. Secretary.*

Chest Clinic,  
Battersea, S.W.

## REPORTS

## EAST ANGLIAN BRANCH

*A Correction.*—In the report of Dr. K. J. Grant's address on "The Fever Hospital" in our last issue, second paragraph, second sentence, the word "necessary" should have read "unnecessary." We regret the apparent contradiction in his argument due to this error.

## HOME COUNTIES BRANCH

*President:* Dr. F. G. Brown (M.O.H., Wanstead and Woodford M.B.; Area M.O., Essex).

*Hon. Secretary:* Dr. J. Maddison (M.O.H., Twickenham M.B.; Area M.O., Middlesex).

The meeting of the Branch held on February 8th, 1952, took the form of a visit to the factory of Messrs. Peek, Frean & Co., Ltd., Keeton's Road, Bermondsey, London, S.E.16. After a conducted tour of the factory, during which members had an opportunity of seeing the latest type of plant used in the manufacture of biscuits, there followed tea and a talk on the Medical Aspects of Industrial Medicine by Dr. J. A. A. Mekelburg, Medical Officer to Messrs. Peek, Frean & Co., Ltd. Dr. Mekelburg afterwards showed members the medical unit.

At a short business meeting it was decided:—

(1) To support the nomination of Dr. Andrew Topping for the Presidency of the Society for the session 1952-53.

(2) To recommend Dr. Rutherford Cramb, who recently retired from the position of Medical Officer of Health, Brighton County Borough, as a fully-paid Life Member of the Society.

A meeting of the Branch was held on Friday, March 14th, 1952, at the London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1. The President and 39 members were present.

The President of the Branch welcomed Dr. W. G. Clark, President of the Society, who was present at the meeting.

The President of the Branch, Dr. F. G. Brown, gave a particularly interesting address entitled "Tuberculosis and the

Medical Officer of Health" which provoked a very good discussion, opened by Dr. J. T. Paterson, Chest Physician, North-East Metropolitan Regional Hospital Board. A very cordial vote of thanks was accorded to Dr. Brown for his excellent address and to Dr. Paterson for opening the discussion.

At the request of the President the Executive Secretary of the Society gave details of the procedure to be adopted for the control of medical manpower. The matter was referred to a small sub-committee.

## MIDLAND BRANCH

*President:* Dr. C. Starkie (M.O.H., Kidderminster M.B.; A.C.M.O., Worcestershire).

*Hon. Secretary:* Dr. W. Alcock (M.O.H., Burton-on-Trent C.B.).

The fourth meeting of the session was held at Lancaster Street Welfare Centre, Birmingham, on Thursday, February 7th, 1952, at 3 p.m.

The President occupied the chair, and there was an assembled company of 42, including several Milk and Dairies Inspectors who had been invited to attend.

The President referred to the death of His Majesty King George VI, and the Honorary Secretary was instructed to convey a message of sympathy to Her Majesty The Queen.

## The Quality of Milk Supplies

Mr. White, Senior Director, Midland Counties Dairy, Birmingham, then addressed the meeting on the above subject. In a brief but refreshingly vigorous address, he urged that action should be taken to press for an amendment of the existing Sale of Milk Regulations, with a view to promoting an improvement in the quality of milk. In most countries milk is paid for according to quality, with a premium for each decimal point of fat above a fixed standard and a similar deduction for each point below. In this country the so-called "presumptive" standards are rendered meaningless where "appeal-to-cow" samples show yields below the standards (3% fat, 8.5% solids not fat). In this country the price of milk is the same whether it contains 3% or 4% and the incentive, therefore, is for quantity rather than quality.

Mr. White quoted impressive figures in support of his argument and pleaded that the Society should make a strong recommendation for a definite minimum standard of butter fat in milk. The Government have recently appointed a Working Party to consider this matter, and there was no body better qualified to speak on this subject than the Society of Medical Officers of Health.

Dr. Lawson then outlined the difficulties experienced in Dudley with regard to the operation of Section 20 of the Milk and Dairies Regulations, 1949, in the case of *Brucella abortus* infection. In Dudley it is customary to serve a notice on the occupier of the premises from which the milk is distributed, requiring the milk supply to be heat treated. This notice remains in force until the milk is proved by repeated tests to be free from infection—a lengthy process, during which the cost of heat treatment falls upon the local authority. It was considered that a joint meeting of representatives of authorities in the Midlands area should be called to discuss procedure in this matter.

A long discussion on both addresses followed, in which many members and guests took part.

The following resolution was proposed by Dr. Martine and seconded by Dr. Molloy: "That the Society of Medical Officers of Health should press for the abolition of the existing 'presumptive' standards as defined in the Sale of Milk Regulations, and the substitution of fixed standards for both fats and non-fatty solids in milk."

A vote of thanks to the two speakers was proposed by Dr. Martine, which was seconded by Dr. Ross and carried unanimously.

## NORTHERN BRANCH

*President:* Dr. J. V. Walker (M.O.H., Darlington C.B.).

*Hon. Secretary:* Dr. W. S. Walton, G.M. (M.O.H., Newcastle-on-Tyne C.B.).

A meeting of the Branch was held on Friday, February 29th, 1952. There were present the President, 27 members and three guests.

It was agreed that the April meeting be postponed until early in May and that Dr. Boucher, Ministry of Health, be invited to give an address on "Home Accidents."

It was agreed that the Branch support the nomination of Dr. A. Topping by the Metropolitan Branch, for the Presidency of the Society.

A letter from the Executive Secretary informing the Branch that the Council could not agree to the names of two candidates from the Branch area going forward for election was received.

Dr. G. H. Shanley referred to a letter on the recent salary award which he had addressed to the Editor of PUBLIC HEALTH



and which had been refused full publication. This action he felt constituted an official stifling of the dissatisfaction felt by members occupying junior posts in the Public Health Service. The matter was referred to the Council of the Branch for consideration after a copy of the correspondence referred to had been obtained.

Dr. A. E. Martin, Ministry of Health, addressed the members on "Civil Defence."

#### WELSH BRANCH

*President:* Dr. W. P. Phillips (Dep. M.O.H., Cardiff).

*Hon. Secretary:* Dr. R. T. Bevan (Dep. M.O.H., Glamorgan).

A special meeting of the Welsh Branch was held at B.M.A. House, Cardiff, on February 8th, 1952. There were 11 members and two visitors present.

The purpose of the meeting was to discuss the recent Industrial Court Award regarding the salaries of Medical Officers in the Public Health Service.

During the course of the discussion points raised included the new scales of remuneration in relation to the change in cost of living and members expressed the view that officers in the Public Health Service could not hope to retain the same standard of living as in the pre-war period. The disadvantages of medical officers in relation to superannuation as compared with other local government officers were also stated. Many members expressed the view that the term "assistant medical officer" was unfortunate, and thought that a designation such as clinical medical officer would be preferable.

The following resolutions were passed:—

(1) The Welsh Branch of the Society of Medical Officers of Health wish to express their dissatisfaction with the award of the Industrial Court, particularly as it affects the remuneration of assistant medical officers.

(2) The majority opinion of the members of the Branch present at this meeting considers that the negotiating machinery was not satisfactory and in particular that assistant medical officers were not, at that time, adequately represented.

(3) It is considered by this Branch that, as in the past, additional qualifications such as the D.P.H., D.C.H., D.R.C.O.G., etc., and post-graduate experience are essential qualifications for entry into the Public Health Service and that possession of these should be recognised in a future salary scale.

#### WEST OF ENGLAND BRANCH

*President:* Dr. A. M. McCall (M.O.H., Chard, Crewkerne, etc., A.C.M.O., Somerset).

*Hon. Secretary:* Dr. R. H. G. H. Denham (M.O.H., Bathavon, Frome, etc., A.C.M.O., Gloucestershire).

A meeting of the West of England Branch of the Society was held in the Council Chamber, Bristol University, on Saturday, February 2nd, 1952. The President and 19 members and three guests were present.

Dr. Cookson referred to some correspondence he had had with Sir John Charles on the subject of the investigation of maternal deaths. He objected to a circular he had received which read as though the obstetrician and not the M.O.H. would undertake the investigation into the circumstances of a maternal death and any necessary follow-up with the hospital, general practitioner or midwife. It was decided to refer the matter to the Council of the Society for their consideration.

#### Social Medicine To-day

Dr. Andrew Topping began a most entertaining review of the present position of Social Medicine by emphasising the fact that the National Health Service had come to stay, whether we liked it or not, and that it was up to us to make every endeavour to correct the unfair bias given to the curative side of medical work to the detriment of the preventive. He thought the Public Health Service had always been too modest about its achievements. We should put more goods in our shop windows and blazon from the house-tops the part played by the Public Health Service in such measures as the reduction of the infantile mortality and of the maternal mortality. The trouble was that preventive medicine was not spectacular and had seldom the news value which the Press found so alluring in other branches of medicine. One saw this in the case of tuberculosis, which got little of the publicity for its prevention that it merited, while poliomyelitis, on the other hand, got too much of the wrong sort. The speaker referred to the unfair remuneration of the public health worker compared with that of the worker on the clinical side. He was of the opinion that the preventive work done in the schools and in the maternity and child welfare clinics was of great importance and he greatly deplored the disintegration of the school dental service. He went on to criticise the medical curriculum of the present day and the tendency to include less and less preventive work.

Considerable discussion followed in which Drs. McCall, Wolfenden, Morley, Bramley and Prof. Neale took part.

Thanks to the speaker for his most stimulating address were proposed by Dr. Smithies and seconded by Dr. McGowan.

#### MATERNITY AND CHILD WELFARE GROUP

*President:* Dr. Anna Gardiner (Sen. M.O., M.C.W., Kent).

*Hon. Secretary:* Dr. Kathleen Hart (A.D.M.O., Middlesex).

*Hon. Asst. Secretary:* Dr. Doris Craigmile (A.D.M.O., Middlesex).

A general meeting of the Group was held in the B.M.A. House on Saturday, February 2nd, 1952. Thirty-nine members were present.

#### The Future Scope of the Work of the Assistant Medical Officer

In the absence of the President, the Past-President, Dr. Florentin, introduced the speaker, Dr. Llywelyn Roberts, Medical Officer of Health for Sheffield. Dr. Roberts and his department gave the Group hospitality at the clinical week-end in Sheffield last year and he had now come, said Dr. Florentin, to give the Group fresh stimulus in his talk.

Dr. Roberts hastened to say that he was sure that the future was not as black as it had been painted. He reminded members of two important reports issued at the beginning of the century: the Report of the Interdepartmental Committee on Physical Deterioration in 1904 and the Royal Commission on the Poor Law and its famous Minority Report in 1909. He compared the suggestions and conception of preventive medicine given in these reports with what had been accomplished up to the present. The Maternity and Child Welfare movement and the Society itself had made a large contribution to this improvement in the people's health, but there were several fields as yet hardly touched upon. For example, much remained to be done regarding the suggestions made about overcrowding, smoke pollution and problem families, to name but a few.

As a health department we had been losing some of our responsibilities and the Maternity and Child Welfare Services would be likely to be much altered in the future with the introduction of general practitioners into the ante-natal and other clinics. The care of mother and child was now an integral part of the structure of general medicine and the doctor who had hitherto specialised in this work would probably have to look to the newer fields of welfare services to enlarge his scope.

One result of the improved health of the people, an indirect result of the improved maternity and child welfare service, was the increase of old people in the present population. Both the National Health Service Act and the National Assistance Act give the Local Health Authority wide powers to help these people, although development of such a service, dependent as it was on money and trained staff, was bound to be slow. Many of these old people suffered from some disability and required care and advice. There was also a fruitful field for research into the possibilities of preventing these disabilities which had hitherto been considered inevitable in old people.

Disabled people, both old and young, required supervision and attempts should be made to assess and predict the capabilities of the young disabled person. This was an aspect in which the assistant medical officer might give valuable help to other organisations interested in the working capacity of the disabled. Welfare services could be provided under Section 29 of the National Assistance Act and the medical officer has an important place in helping to determine the best means of minimising the effects of disability.

The after-care of the tuberculous, and in particular the care of their families, was a proper sphere for the assistant medical officer. A wide-scale study of B.C.G. vaccination and of the tuberculous family unit was required.

The hard of hearing, the deaf and dumb, especially their children, were in need of care.

The sphere of mental ill-health was a large one. About half the hospital beds in the country were occupied by the mentally defective and the mentally ill and there was a large number insufficiently ill to warrant a hospital bed who would benefit from expert supervision. The World Health Organisation's report laid great stress on the importance of the part the Maternity and Child Welfare Services could play in prevention of mental ill-health.

Problem families, although decreasing in number, were still a source of trouble and expense to the country. While established problem families required radical treatment, much more might be done to prevent borderline families becoming real problem families.

In all these aspects of preventive medicine which might well become the proper sphere of the assistant medical officer, the health visitor, working among the homes of her own district, was a most important unit. She dealt with all the problems of her "parishioners" and was able to call on specialist help in various fields as required. She should, of course, work in co-



operation with the general practitioner. In many cases the assistant medical officer would gain a great deal by going out into the homes of the people and by so doing would be able to learn a lot and also help many who would otherwise be neglected. Here again it must be stressed that the liaison with general practitioners is of paramount importance for the responsibility of family health. The new welfare services of a local authority are all aimed at providing assistance to the general practitioner to give the maximum care for his patient. Such an expansion into other fields was logical and followed the pattern of change from the early welfare services to the broader concept of social medicine.

In proposing a vote of thanks to Dr. Roberts, Dr. Hilda Davis expressed the Group's appreciation for the transfusion of new thought which he had given.

The Group held a general meeting on Friday, March 7th, in the Old Library, B.M.A. House. Forty-one members were present.

### Mental Health and Maternal Care

The President introduced Dr. John Bowlby, the Director of the Child Guidance Department of the Tavistock Clinic, who spoke on the above subject. He said that nearly 50% of hospital beds were at present occupied by psychiatric casualties and it was in everybody's interest that mental ill health should be prevented. The medical officers of the Maternity and Child Welfare Service were in a key position in this respect and he was especially eager to discuss this with them. The science of child psychology was to a large extent the study of the child in relation to the parent.

Dr. Bowlby defined mental ill health as a dysfunction of the ability to make relationships with other human beings. On the whole, man co-operated with his kind and a person who deviated from this was almost certainly unhappy. Somewhere between birth and the fifth birthday a lot happened to the child. Between four and six months, the child recognised his mother as a distinct human being and became increasingly attached to her, until somewhere towards the end of the third year. Somewhere between two and a half and three years there was a rapid change, and the child who, before, had been merely a continuation of the embryological child became, psychologically, an independent creature. He compared psychological development to that of speech in a deaf child; for if such a child does not learn to speak before the age of three, there is far greater difficulty in teaching him to speak. So it was before the third year with the establishment of good human relationships.

Turning to the delinquent child, Dr. Bowlby spoke of a certain type of child who was unable to make permanent relationships, quite a number of children who attended child guidance clinics were of this type and heading for the class of prisoner known as the "regulars." The fact that there had been a history of psychological difficulty all along did not necessarily mean that this was an inherited tendency. In such children the mother-child relationship was non-existent, though such a child might be apparently normal and attractive at the first meeting. Separation from the mother for six months or more during the first five years of life might fracture the development of the relationship with mother and so produce a psychopathic personality. Only a minority of the children who experienced these separations developed psychopathic personalities however. Psychologists recognised a characteristic sequence of reactions in a child who had been taken away from home for any length of time and then returned home. At first, the child appeared "frozen up" and either did not recognise his parents, or, if he recognised them, did not respond to them. Then followed an emotional outburst and then the child tended to follow his mother round like a shadow. This reaction was so common as to be usual. If the mother realised what was happening and responded kindly, the child got over the upset, though this might take many months. If, however, his distress was met by discipline on the grounds that he had been "spoilt" while away, for example, in hospital, then the situation was made worse.

Dr. Bowlby condemned hospitalisation for children under five years. The Newcastle scheme was good but he would prefer to see the money required for the upkeep of the hospital spent on providing facilities for the child to be nursed at home. It would not only be cheaper for the country, but better for the child. Similarly, he felt that the money spent on day nurseries could be better used to keep the young child at home with his mother. In practice only a fraction of unmarried mothers looked after their children and it would be better to realise the importance of continuous care for the child and to encourage adoption of children whose mothers were obviously unlikely to provide for them.

Among answers to questions, Dr. Bowlby said that the treatment of emotionally hardened children was extremely difficult and lengthy, and that was why prevention was so important. In answer to a question on how he would judge whether an unmarried mother would accept her baby, he said that he would take into account her own relations with her family and her attitude to the pregnancy. If she was the kind of girl who had never made much of things, she would be unlikely to make a good mother for an illegitimate child. He thought that infants of mentally defective girls should not be barred from adoption as they were most probably of quite normal mentality.

A vote of thanks was proposed by Dr. Madeley, who said she was relieved to find that Dr. Bowlby had only once used the word "maladjusted," and thanked him for giving a definition of child psychology which we could all understand.

### SCHOOL HEALTH SERVICE GROUP

*President:* Dr. A. Morrison (S.M.O., Derby C.B.).

*Hon. Secretary:* Dr. A. A. E. Newth (S.M.O., Nottingham C.B.).

*Asst. Hon. Secretary:* Dr. J. B. Morgan (S.M.O., Derbyshire C.C.).

An ordinary meeting of the Group was held in the Old Library, B.M.A. House, London, on October 19th, 1951. Forty-five members were present.

After the apologies for absence had been read, the Acting President, Dr. G. H. Hogben, in the absence of the retiring President, Dr. F. J. G. Lishman, invested Dr. Morrison with the presidential badge. He recalled that Dr. Morrison was one of the original members of the Group since its revival, the first meeting being held in the Guildhall, Derby, on December 3rd, 1943; he had given most generously of his services to the Group, having been Assistant Hon. Secretary since then, except for the session 1949-50 when he was Hon. Secretary. Dr. Morrison, after thanking the Group for the honour they had conferred on him, spoke of his predecessors whose names were engraved on the bars of the ribbon of the badge he was wearing.

The President then signed the minutes of the previous ordinary meeting held on March 30th, 1951.

The Hon. Secretary reported that the Council had met on June 15th and on that day. Among other matters dealt with had been the Draft Tuberculosis Regulations, Draft School Building Regulations, Medical Record Cards, and the question of the age at which children should enter school and the education of backward children in ordinary schools, and co-operation between chest clinics and L.E.A.s. They had decided to repeat the Manchester Refresher Course on Deafness in the spring of 1952. They had formulated replies to the questions on child guidance put to the Society by the Secretary of the Committee of the Ministry on Maladjusted Children and had nominated members to give oral evidence.

They had decided that ordinary meetings should be held on January 18th and March 28th, 1952, and the annual general meeting on June 20th, 1952. Drs. Cheesman, Gilchrist and Hogben were appointed to serve on the Inter-Group Committee.

The following Fellows of the Society were unanimously elected as members of the Group: Drs. F. G. A. Arnson, A. M. Brown, June B. Brown, Lily C. Butler, A. S. Carey, Edna Circuit, Gwendolen K. G. Coote, D. M. Evans, A. A. Ford, G. Fraser-Smith, F. V. Jacques, Dorothy M. Jones, Mary A. H. Lawson, Martha E. Lebermann, Joan N. Leedham, Hilda M. Lewis, J. W. McConachie, W. H. S. McGregor, Brenda M. Mead, Margaret M. Meikle, E. S. A. Meyers (N.S.W.), Enid A. Reed, O. V. Rees, L. S. Stephens, Alta F. Stout, S. W. W. Terry, W. Wagland and G. E. Welch.

Dr. Morrison then read his Presidential Address (which has been published in *PUBLIC HEALTH*, December, 1951). After a most interesting discussion, the appreciation of the meeting was expressed by Dr. Hogben, seconded by Dr. Alford.

An ordinary meeting of the Group was held in the Old Library, B.M.A. House, London, on Friday, January 18th, 1952, at 4 p.m. The President was in the chair and 27 members were present.

After the apologies for absence had been read the minutes of the last meeting, held on October 19th, 1951, were approved and signed.

The following Fellows of the Society were unanimously elected as members of the Group: Drs. Beryl G. Anscombe, C. T. Baynes, A. S. Caldwell, P. V. Cant, Julie M. D. Corrigan, C. D. Cormack, Margaret L. Dennis, Joan M. B. Edwards, Mohamed Farroq, Margaret J. Garmany, R. Glenn, J. H. Kahn, Caroline A. Meade, E. B. Meyrick, J. R. Murdoch, A. M. Nelson, Anne E. Surtees and G. P. Wallace.

The Hon. Secretary reported that the Council of the Group had met that day and had again discussed the treatment and education of children with cerebral palsy, weighing machines,

the charges made for lenses in cello frames, the refraction and prescribing of spectacles for children by opticians, free meals for pupils in attendance at private schools, the medical examination of children attending private schools, the draft memorandum of the Ministry of Education on the medical examination of teachers, the proposed revision of the M.D. Acts, the S.H.S. and the General Practitioner, and, with the help of Mr. Gordon Taylor, the Dental Bill.

### HOW NOT TO WRITE

Dr. T. F. Fox, F.R.C.P., then read a paper on "How Not to Write." Speaking from his experience as editor of the *Lancet*, he offered sound advice served with dry humour. Articles, he said, should convey their meaning in a readable style appropriate to the writer. He allowed the release of new words provided that they did not oust older, more serviceable ones, and he did not attach much importance to grammatical embargoes—on the split infinitive for example. We should try to be ourselves as we write and should not use impersonal phrases as "the writer" or "your medical officer." No doctor was primarily an official and he wished we could be known not as "school medical officers" but as "school physicians." He suggested that first thoughts might be set down quickly as they came to mind and then carefully revised at leisure with the help of a candid friend. "Any paper worth printing once is worth typing at least twice," and articles should be submitted in double or triple spacing. He recognised that officialese or legal language might be necessary for certain communications, but he warned his audience against jargon and gobbledegook, giving amusing examples, real and imaginary.

After many speakers had joined in a lively discussion, Mr. Elliston, proposing a vote of thanks in which he included his father, Sir George, who was unable to be present owing to a chill, suggested that the writing of English might form part of the D.P.H. course. Dr. Smallwood, of Bristol, seconded the vote of thanks.

### SCHOOL HEALTH SERVICE GROUP

#### (Midland Sub-group)

*President:* Dr. B. Sergeant (Dep. S.M.O., Wolverhampton C.B.).

*Hon. Secretary:* Dr. M. E. Lemin (Dep. S.M.O., Birmingham C.B.).

A summer meeting of the above Sub-group was held at the Central School Clinic, Gulsan Road, Coventry, on July 14th, 1951. At this meeting a most interesting talk was given by Dr. Parry Williams, paediatrician to the Coventry Authority, on "Recent Advances in Paediatrics," wherein he referred especially to obesity in children. This talk was followed by a brisk discussion.

Following this discussion tea supplied by the nursing staff was served at the Gulsan Road Clinic.

Later in the evening a number of the members and their guests met at the Imperial Hotel, Birmingham, for dinner. Later the Sub-group and their guests visited the Theatre Royal to see "The Chocolate Soldier." It was hoped some such social event could be held each year in the summer.

The autumn meeting of the Sub-group was a joint meeting with the sister Sub-group of Maternity and Child Welfare and was held at the Children's Hospital on October 27th, 1951. On this occasion Dr. Hatherley, President of the Maternity and Child Welfare Sub-group, took the chair. Dr. W. H. Cant, Paediatrician at the Children's Hospital, spoke on "Congenital Abnormalities." The talk proved to be of great interest.

The Matron and Staff of the Children's Hospital were good enough to provide tea.

The attendance averages about 23 members at each meeting. A number of new members have joined the Society through the Sub-group.

### NATIONAL FOOT HEALTH WEEK, JUNE 16th TO 21st

The Foot Health Exhibition to be held in connection with the above Week organised by the Foot Health Educational Bureau will be opened at the Army and Navy Stores, Victoria Street, London, S.W.1, on Monday, June 16th next, by Miss P. Hornsby-Smith, M.P., Parliamentary Secretary to the Ministry of Health. Women's footwear and foot problems will be the central feature of the exhibition and one of the stands, "Women at Work," will deal with problems common to all women who, in homes or factories, hospitals and elsewhere have to stand for long hours. Foot health in the young and old will also be the subject of exhibits, lectures and discussion.

### R.L.P.H. & H. AWARDS

The Council of the Royal Institute of Public Health and Hygiene have made the following triennial Awards: (a) the Harben Medal, under the terms of The Harben Trust for "eminent services rendered to the public health"; to Prof. E. C. Dodds, M.V.O., M.D., F.R.C.P., F.R.S.; (b) the Smith Award, "to a Medical Officer of Health recognised as having done the most noteworthy work in the discharge of his official duties," to Dr. Andrew J. Shinnie, O.B.E., M.D., D.P.H., Medical Officer of Health, City of Westminster.

The presentations will be made at a social function to be held at the Institute, 28, Portland Place, London, W.1, on Wednesday, July 16th, 1952, at 3 p.m.

### C.C.H.E. INFORMATION DIGEST

This useful booklet, of 48 typed pages, compiled by Dr. Anne Burgess and Priscilla Milton, has been duplicated for the benefit of Medical Officers of Health and others who want up-to-date information on subjects of "live" importance in the health field. Copies are now available at 1s. 6d. from the C.C.H.E., Tavistock House, Tavistock Square, London, W.C.1. Further issues will be made available at six-months intervals.

### OFFICIAL NOTICES

#### SOCIETY OF MEDICAL OFFICERS OF HEALTH

Notice is hereby given that an Ordinary Meeting of the Society will be held in the Council Chamber, B.M.A. House, Tavistock Square, London, W.C.1, on Friday, May 2nd, 1952, at 12.30 p.m., or as soon as possible thereafter on the conclusion of the preceding Council Meeting.

#### AGENDA

1. Minutes.
2. Correspondence.
3. Election of the President of the Society for the session 1952-53, on the nomination of the Council.
4. Election of the following as fully-paid Life Members, on the nomination of the Council and of their Branches:—

#### East Midland Branch

Dr. William Barr (formerly M.O.H., Rotherham C.B.).

Joined Society 1911.

Surg.-Capt. A. B. Clark, R.N. (ret.) (formerly M.O.H., Kirby-in-Ashfield U.D., and A.M.O.H., Notts). Joined Society 1920.

5. Election of Fellows and Associates (names listed on sheets enclosed with this issue of PUBLIC HEALTH).
6. Nominations.
7. Any other business.

By Order,

G. L. C. ELLISTON,  
*Executive Secretary.*

Tavistock House South,  
London, W.C.1.

April 16th, 1952.

### FIFE COUNTY COUNCIL

#### HEALTH AND WELFARE DEPARTMENT

Applications are invited from Registered Medical Practitioners for the following appointment:—

#### SENIOR MEDICAL OFFICER (MALE)

#### (CHIEF EXECUTIVE SCHOOL MEDICAL OFFICER)

Applicants must possess a degree or diploma in State Medicine or Public Health, have had experience in School Medical Work and in classification and disposal of educationally handicapped and maladjusted children. The post will carry duties in connection with the organisation and administration of the School Medical Service and such other duties as may be allocated from time to time by the County Medical Officer, who is the Chief School Medical Officer for the County including the large Burghs therein. Commencing salary £1,250 per annum rising by annual increments of £50 to £1,650 per annum. The successful candidate will require to undergo a medical examination for superannuation purposes. Applications, with names of two referees and furnishing particulars of age, experience, etc., to be lodged with the County Medical Officer, County Buildings, Cupar, Fife, within a period of seven days from the date of the appearance of this advertisement. No canvassing.

J. M. MITCHELL,  
*County Clerk.*

County Buildings,  
Cupar, Fife.  
March 31st, 1952.



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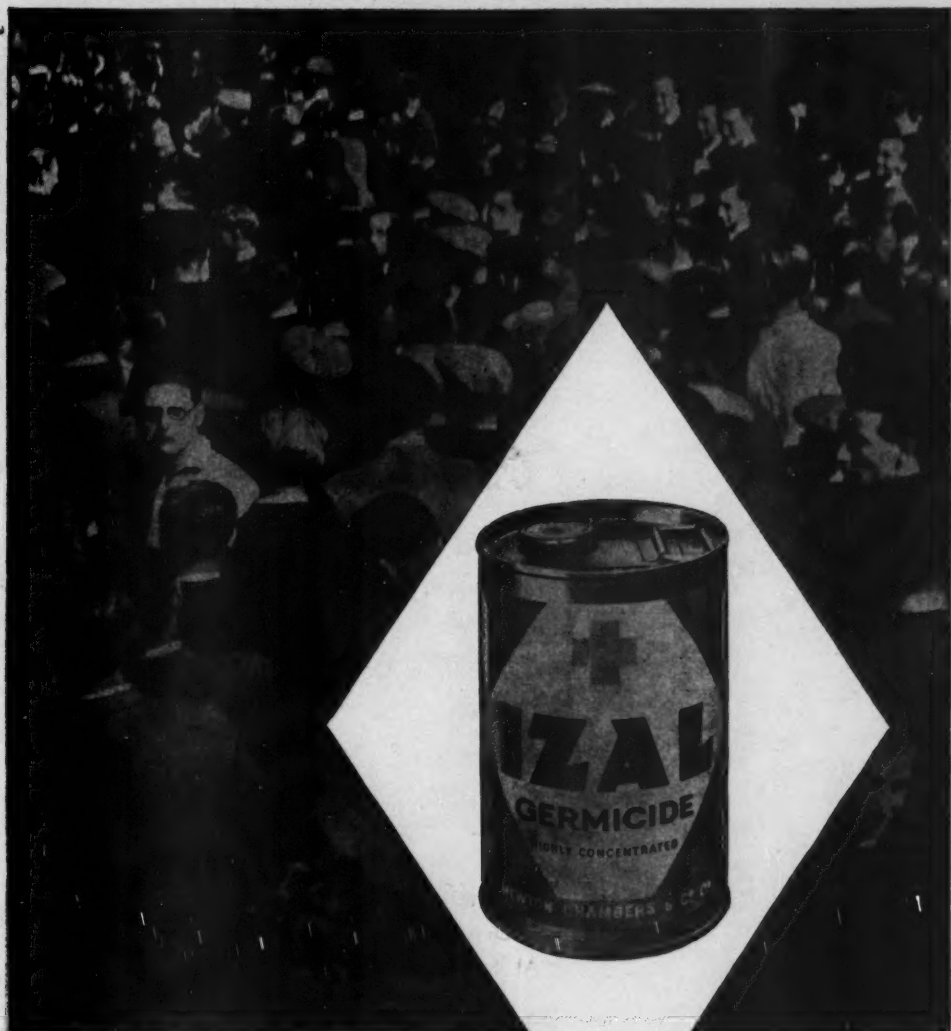


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Research Laboratories, the dose has been reduced from the large doses then necessary to the 1-3 c.c. used today, the product is many times more effective, and serum reactions have been reduced to a minimum.

*Note. 'Wellcome' Tetanus Antitoxin is now labelled in terms of the new 1950 International Unit which is twice the strength of the old (1928) unit and is therefore equal to the U.S.A. unit.*

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